

**AMENDMENT #1 TO THE FACT SHEET FOR  
STATE WASTE DISCHARGE PERMIT ST-8033**

<b>GENERAL INFORMATION</b>	
Applicant	Kinross Gold Corporation Kettle River Operations
Facility Address	363 Fish Hatchery Road Republic, WA 99166
Type of Facility	Gold and Silver Mining and Milling
Type of Treatment:	Lined Tailings Impoundment
Legal Description of Tailings Pond Area	Within the SW <sup>1</sup> / <sub>4</sub> of Section 26, Township 37 N., Range 33 E., Ferry County Latitude: 48° 40' 28" N. Longitude: 118° 36' 17" W.

**HISTORY:**

Kinross Gold Corporation operates a gold and silver mining and milling operation (Kettle River Project) in Ferry County near the Town of Republic. The Project commenced in 1989 and originally included the Key Mill and tailings disposal facility, and the Overlook and Kettle underground mine sites. Since that time, an additional three mines have gone into production: the Key Project (two adjacent open pits), the Lamefoot, and K2 mines (both underground). Currently, the Overlook, Kettle, Key Project, and Lamefoot mine sites are in the process of, or have completed, final reclamation. In the fall of 2002, the production at the K2 mine was suspended while exploration for additional reverses continued. The Key Mill and tailings disposal facility are currently on a care and maintenance program.

The Department holds two reclamation assurances for site activities. These include the reclamation requirements for the Key Mill tailings impoundment and the Lamefoot mine site. The site activities are also covered by the Department's sand & gravel and baseline general stormwater NPDES permits.

Well LF-2 is shallow well located along Wolf Camp Road, completed in valley fill/alluvium (37 feet bgs). The well is adjacent to the mine workings, and will quantify any ground water quality changes to the shallow aquifer when the mine workings refill. After this refilling, groundwater flow within the mine will be controlled by these mine voids and the hydrostatic head in the mine pool. Seepage to the surface/near-surface may result where mine workings intersect with faults and fractures (BLM, 1998). Groundwater modeling conducted by the BLM suggests that water may move out of the workings through the Wolf Camp fault and into the valley (BLM, 1998).

**Permit Amendment:**

As explained in the original fact sheet, ground water enforcement limits were set for well LF-2 based on pre-mining levels for TDS, sulfate and nitrate. These limits were calculated using a 95 percent tolerance interval with a 95 percent confidence level. Both sulfate and TDS concentrations have decreased in LF-2 since mining occurred. This is attributed to the interception of groundwater flow through the mineralized ore body as a result of mine dewatering. However for nitrates, a similar trend is not observed. Post mining nitrate concentrations (since the spring of 1992) show much more variation than pre-mining levels (see attached figure). Therefore, setting limits for LF-2 nitrates based on pre-mining conditions appears to have been a mistake.

The Department has recalculated a 95 percent tolerance interval for nitrate concentrations in well LF-2 of 1.97 mg/L (data from April, 1992 to June, 2006). Because of the number of data points, a 99 percent confidence level is associated with this value.